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<thead>
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<tbody>
<tr>
<td>HTA</td>
<td>HTA-1</td>
<td>HTA</td>
<td>HTA</td>
<td>Vision</td>
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<tr>
<td>Re-design</td>
<td>Action</td>
<td>Task</td>
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<tr>
<td>Vision</td>
<td>UED</td>
<td>Stakeholder</td>
<td>UED-1</td>
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Ques: Meaning of HTA

What does HTA mean?
Ans: HTA Meaning

HTA means ‘Hierarchical Task Analysis’
Ques: Task definition

What is a *task*?
Ans: Definition of a Task

A *goal* with an *ordered* set of *actions*
Ques: Action definition

What is an *action*?
Ans: Definition of an Action

A low-level task that does not require any problem solving or control structure to accomplish
Ques: Types of task analysis

What are the 2 alternative views of task analysis?
Ans: 2 views of task analysis

• Action-centric:
  – concerned with the steps involved in completing a task (e.g. HTA)

• Cognition-centric:
  – concerned with how users think, solve problems, remember, visualize/model/understand to accomplish a task (e.g. GOMS – goals, operators, models, selection)
Ques: HTA parts

What are the elements you need to include in an HTA like the ones we did in this class?
Ans: Elements in an HTA

A hierarchy of tasks (actions) and a plan that describes their order
Ques: Using HTA for work re-design

How did we use HTA to re-design work in this class?
Ans: Work re-design with HTA

1. Use HTA to specify how work is currently done
2. Create modified HTA that re-designs the work
Ques: Using HTA to create UED

How did we use HTAs to create a UED in this class?
Ans: UED from HTAs

Go through re-designed tasks to develop places and functions needed in the UED to support the tasks
Ques: UED purpose

What is the purpose of a UED?
Ans: UED purpose

A UED shows what work will be performed where and on what
Ques: UED elements

What are the UED elements called that correspond to ‘what work will be performed where and on what’?

Where:
What work:
On what:
Additional elements:
Ans: UED elements

Where: Focus area (the places)
What work: Functions provided
On what: Objects that are manipulated

Additional elements:
- Name of focus area
- Purpose of focus area
- Links to other focus areas
Ques: Stakeholder definition

What do we mean by the term *stakeholder*?
Ans: Stakeholder definition
Anyone with a vested interest in the system:
Primary: System users
Secondary: People who benefit directly or indirectly from the system’s success (co-workers, managers, people who purchased the system, developers, ...)

Ques: Stakeholder input

True or False?

When we interview different stakeholders, we always get consistent input.
Ans: Stakeholder input

Ha, ha, ha!

We OFTEN receive conflicting needs from different stakeholder and types of stakeholders. Then we have to balance conflicting needs.

Whose input should count the most in these situations?
Ques: Vision definition

What is a vision?
Ans: Vision definition

A summary:

• Problems/breakdowns that *will be solved*
• What currently *works*
• How you will redefine and improve work *practices*
• Metrics you will use to measure success in solving the problems
• NO DESIGN/IMPLEMENTATION IDEAS
  – Where should these be?
What is the purpose of a vision?
Ans: Vision purpose

Defines what a successful outcome will be.

• *It is not enough to design something new and different*

• Want to *significantly* improve workflow in a demonstrable way

A vision helps us know we are successful
Ques: Vision example 1

Comment on this vision:
Users of current debit card terminals encounter difficulties providing account information: the method, swiping a card, is error-prone due to card readers that can read a card in only one orientation. We will improve this process by creating a system that allows for multiple card orientations by adding hardware to the terminal reader that can read on either side of the debit card.
Ans: Vision example 1

☑ Problems/breakdowns that will be solved
☒ What currently works
☑ How you will redefine and improve work practices
☒ Metrics you will use to measure success in solving the problems
☒ NO DESIGN/IMPLEMENTATION IDEAS
Comment on this vision:

Assistants must generate reports for management that are “perfect”. Assistants encounter problems because the raw data comes from a legacy system and the report generators require completely different data formats. We will improve this process by creating a system that preserves the data sources and report generators, but reduces the number of systems the assistant has to interact with directly.
Ans: Vision example 2

❌ - NOT DEFINED Problems/breakdowns that will be solved
✔️ - SORT OF - What currently works
✔️ How you will redefine and improve work practices
✔️ - SORT OF Metrics you will use to measure success in solving the problems
✔️ NO DESIGN/IMPLEMENTATION IDEAS

Really poor construction! No logic flow: what does ‘perfect’ have to do with anything? What does reducing the number of systems have to do with problems? What are the problems anyway?
Ques: HTA example 1

Comment on this HTA:

0. Decide reports to create
1. Sort downloaded data by date
   1.1 Open downloaded data in Excel
   1.2 Select all data and all columns
   1.3 Choose Filter-> Custom Sort -> sort on date column
2. View previous reports
   2.1 Get out latest hard-copy version of each report
   2.2 Open latest version of each report on computer
3. Compare report data and downloaded data dates
   3.1 Look at each report section and check date listed for data against date in spreadsheet
4. Decide which reports used older data and need to be replaced
   4.1 Record the name of each report that has newer data to remember what reports need to be regenerated
Ans: HTA example 1

- Goal – 0: decide reports to create
- Hierarchy of tasks/actions: 1-4, with sub-tasks for each.
- MISSING - Plan that describes order
Ques: HTA example 2

Comment on this HTA:
0. in order to clean the house
1. get the vacuum cleaner out
2. get the appropriate attachment
3. clean the rooms
4. clean the hall
5. clean the living rooms
6. clean the bedrooms
7. empty the dust bag
8. put vacuum cleaner and attachments away

Plan 0: 1 – 6 in that order, then 8, and when the dust bag is full do 7
Ans: HTA example 2

✓ Goal – 0: clean house
✗ - MISSING - Hierarchy of tasks
✓ Plan that describes order
Ques: HTA example 3

Comment on this HTA

0. make a cup of tea

plan 0.
do 1
at the same time, if the pot is full 2
then 3 - 4
after four or five minutes do 5

1. boil water
2. empty pot
3. put tea leaves in pot
4. pour in boiling water
5. wait 4 or 5 minutes
6. pour tea

plan 1.
1.1 - 1.2 - 1.3
when kettle boils 1.4

1.1. fill kettle
1.2. put kettle on stove
1.3. wait for kettle to boil
1.4. turn off gas
Ans: HTA example 3

- Goal – 0: make a cup of tea
- Hierarchy of tasks: 1-6, with sub-tasks for 1
- Plan that describes order
Ques: HTA example 4

Comment on this HTA:

1. Choose to decide by data date
   1.1 Indicate location of latest raw data
   1.2 Indicate location of latest versions of reports

2. View comparisons
   2.1 View section summary of report alongside date of newest data; sections where newer data is available are called out somehow

3. Decide which reports used older data and need to be replaced
   3.1 Select reports that should be recreated
   3.2 Confirm proposed selection of reports that should be recreated
   3.3 Verify names of each report to be recreated
Ans: HTA example 4

- MISSING - Goal

- Hierarchy of tasks: 1-3, with sub-tasks for 1

- MISSING - Plan that describes order
Ques: UED example 1

Comment on this UED:

Name: 1. Main
Purpose: See what’s possible
Links: 2. Generate reports 3. Check reports against new data

1. Generate reports
Function: Pick reports to create

Name: 4. Validate data
Purpose: Validate transforms for data
Function: > 30. Generate reports

Name: 3. Update based on new data
Purpose: Choose old reports to update
Functions:
- Creates “list” of report sections with old and new data dates
- Tags reports with sections based on older data as proposed to be updated
- Allows user to select reports or confirm proposed reports to be updated
- Creates “list” of reports to create
Links: Location of new data Location of existing reports 4. Validate data 5. Generate reports
Objects: New downloaded data Latest versions of existing reports

Name: 5. Generate reports
Purpose: Create a report
Links: > 4. Validate reports
Ans: UED example 1

☑ Focus areas
☒ Focus name: not always clear
☒ Focus purpose: missing on #1
☒ Functions: link on #4, missing on #5
☒ Links to other focus areas: missing on #4, incorrect on #1, #3
☒ Objects manipulated in the focus area: missing on #4, #5

Other: hard to parse #3!
Ques: UED example 2

Comment on this UED:

1. Main menu
   See what I can do
   Links
   > Shop
   > Member services
   > Tips for working moms
   > Refer a friend
   > AHA online
   > Peapod Pantry
   > New on Peapod

16. Peapod Pantry
    Join a community of shoppers
    > See shopping tips
    > See recipe aisle

17. Recipe aisle
    See different kinds of recipes available
    > Recipe of month
    > Lost recipes
    > Found recipes
    > Write the Peapod Pantry

21. Recipe of the month
    Read a recipe chosen by the Pantry maintainers
Ans: UED example 2

- Focus areas
- Focus name
- Focus purpose: not labeled as such
- Functions: not clear; some look like links, missing on #21 – maybe all are links?
- Links to other focus areas: not clear on 16, 17
Ques: Re-design process

What are steps in re-designing work?
Ans: Re-design process

1. Study consolidated contextual inquiry models and affinity diagram to decide what “tasks” to re-design
2. Create a vision for the new system
3. Perform HTA on each task as it exists and then re-design it
4. Create/augment UED to support re-designed tasks and previous tasks that will still be supported
Ques: Vision validation

How can you validate your vision?
Ans: Vision validation

- Check the problems you are trying to solve and the things you are preserving exist in the contextual inquiry consolidated models and affinity.
- Check that the initial measures of success you include are important to users, as seen in the affinity.
Ques: HTA validation

How do you validate an HTA for either the current system or the re-designed work?
Ans: HTA validation

• Check an initial HTA against the consolidated sequence model
• Check a re-designed HTA against:
  – the consolidated sequence model to see if intents are preserved
  – the affinity to see that things important to the user are included
  – the vision to make sure it is part of the improvements you wanted to make.
Ques: UED validation

How do you validate a UED?
Ans: UED validation

• Make sure that all re-designed HTAs are supported in the UED
• Make sure that the things you said you’d preserve in the vision are supported in the UED
• Are the focus areas logical places where work is done with no software/hardware constraints?
• Do all the focus areas have non-overlapping functions they support?